STATE OF NEW HAMPSHIRE

Inter-Department Communication

DATE: January 26, 2012
AT (OFFICE): NHPUC

FROM: Kate Epsen

SUBJECT: DE 10-212 Commercial and Industrial Incentive Program: Recommended program changes

TO: Commissioners, Debra Howland

CC: Jack Ruderman, Suzanne Amidon

The Public Utilities Commission approved a Commercial and Industrial (C&I) solar rebate program on October 1, 2010, under Docket DE 10-212 through Order 25,151. This rebate program was established pursuant to RSA 364-F:10, VIII. The C&I rebate program application forms, Step 1 and Step 2, were released to the public on November 1, 2010 and contained the complete program terms and conditions, as ordered by the Commission. In the thirteen months plus of the program's operation, there have been seventy-two applications for solar electric, solar hot water, and solar space heating projects. While this program is functioning well, the first year of experience, including discussion with many participant installers and rebate recipients, and deeper sensitivity analysis of rebates, production, and project finance have led Staff to conclude that five program changes would improve the program and better meet the needs of future participants, while continuing to expend Renewable Energy Fund monies in the public interest, pursuant to RSA 364-F:10, I.

The suggested program modifications are as follows:

1. Allow modeling results from PV Watts, T-Sol and other energy production models, in addition to RETScreen. RETScreen is currently required as the only accepted energy production modeling program. Although RETScreen is a free, open access modeling tool, many installers have observed that the software often does not include options for the equipment used in the proposed system, and as a result, may poorly reflect the true output of the system. Other open-access models, such as PV Watts, and licensed models, such as T-Sol™, may offer more accurate results and better reflect the true parameters and performance of the proposed systems. It is therefore recommended that the program be modified to still require modeling, but to also accept modeled results from other energy model programs in addition to RETScreen.

2. Increase the solar thermal incentive for small systems (fifteen collectors or fewer) to $0.12/kBtu, but no more than 25% of installed costs and capped at $50,000.

The current incentive level of $0.07/thousand Btu/year has proven to be adequate for large solar water and heating systems, but has proven too small to incent smaller systems, often offering a total rebate that is less than ten percent of the total project costs. A $0.12/kBtu/year incentive level would offer a total rebate that is comparable to the solar electric rebate level, in terms of percent of project costs. The rebate level of $0.07/kBtu/year would remain the same for systems of sixteen collectors or more, and all rebates would be capped at 25% of project costs, or $50,000.

3. Explicitly allow third-party ownership –purchase power agreement (PPA) project model. Although RSA 362-F does not prohibit third party owners of renewable energy systems in New Hampshire from receiving a rebate, the program currently requires third party owners (usually under a power purchase agreement business model) to request a waiver from the Puc 2507 rules (Reference DE 11-183 for the full discussion on this issue). Because this is a widely used and successful business model that may better promote the deployment of renewable energy systems in New Hampshire while still fully complying with the existing statutes and rules, Staff recommends that the Commission explicitly allow use of third-party ownership (PPA) project structures where the conditions of Puc 2507 have been met by one or more of the parties to the PPA.

4. Change incentive from $1.00 per Watt A/C to $0.80 cents per Watt D/C . The current solar electric incentive is $1.00 per Watt A/C. This incentive, pegged to A/C power rather than D/C power, was designed to encourage maximum efficiencies in equipment (e.g. inverters) and design; however, basing the incentive level off of the rated A/C capacity has led to a wide range of derating factors that may reflect the applicant's understanding of the application process better than the actual efficiency of the system. The range used for converting D/C to A/C power has ranged from 94% to 75%. Converting the incentive to D/C and reducing to $0.80 gives a similar monetary incentive while minimizing the subjectivity involved with installer/designer conversion discretion and confusion.

5. Clarify the 100 kW cap to mean 100 kW D/C. Currently the program states that rebates are available for systems up to 100 kW, but does not specify if this is in A/C power or D/C power. In order to minimize potential confusion on size allowances among program participants, clarifying this cap to mean D/C power is recommended. Using D/C power will ensure better transparency and sizing consistency across diverse panel manufacturers, models, inverters, and overall system design.

According to Term and Condition number nine (9.) in the Step 1 rebate application, "The Commission reserves the right to modify the program terms, conditions, or technical requirements when it is deemed to be in the public interest. A history of this program design and future modifications can be found in PUC Docket No. DE 10-212, linked here."

Given this condition, Staff recommends that the recommended changes herein be adopted and summarized in a secretarial letter that will be shared with all past installer participants and posted in the appropriate docket, DE 10-212. Current available funding under this program is greater than $500,000, which is more than sufficient to support an increased solar thermal incentive level and better participation from third party ownership (PPA) projects.